IN THE CLAIMS:

Please amend claims 7, 11, 18, 33, 40, 44 and 46-51.

This listing of claims will replace all prior versions, and listings of the claims in the application.

Listing of the claims

1. (Previously presented) A pyrogen-free composition comprising a plasmid comprising a nucleotide sequence that encodes an immunogen operably linked to regulatory elements and a nucleotide sequence that encodes an immunomodulating protein operably linked to regulatory elements, wherein said immunomodulating protein is selected from the group consisting of: MCP-I, MIP-lα, MIP-lβ, IL-8, and RANTES, L-selectin, P-selectin, E-selectin, CD34, GlyCAM-1, MadCAM-1, LFA-1, VLA-1. Mac-1, pl50.95, PECAM, ICAM-1, ICAM-2, ICAM-3, CD2, LFA3, mutant forms of IL-18, CD40, CD40L, vascular growth factor, IL-7, nerve growth factor, vascular endothelial growth factor, Fas, TNF receptor, Flt, Apo-l, p55, WSL-1, DR3, TRAMP, Apo-3, AIR, LARD, NGRF, DR4, DR5, KILLER, TRAIL-R2, TRICK2, DR6, and Caspase ICE.

2. (Original) The plasmid of claim 1 wherein said immunogen is a target protein that encodes a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases.

3. (Original) The plasmid of claim 1 wherein said immunogen is a pathogen antigen.

4. (Original) The plasmid of claim 1 wherein said immunogen is an HIV-1 antigen.

5. (Canceled)

6. (Original) An injectable pharmaceutical composition comprising the plasmid of claim 1.

7. (Currently amended) A method of inducing cytotoxic T cell response in an individual against an immunogen comprising administering to said individual a plasmid of claim 1 by intramuscular injection.

8. (Canceled)

9. (Previously presented) The plasmid of claim 1 wherein said immunogen is herpes simplex antigen HSV2gD.

10. (Previously presented) An injectable pharmaceutical composition comprising the plasmid of claim 9.

11. (Currently amended) A method of immunizing an individual against a herpes simplex virus infection comprising administering to said individual a plasmid of claim 9 by intramuscular injection.

12. (Previously presented) A pyrogen-free composition comprising two plasmids: a first plasmid comprising a nucleotide sequence that encodes an immunogen operably linked to regulatory elements; and a second plasmid comprising a nucleotide sequence that encodes an immunomodulating protein operably linked to regulatory elements, wherein said immunomodulating protein is selected from the group consisting of: MCP-I, MIP-la, MIP-lp, IL-8, and RANTES, L-selectin, P-selectin, E-selectin, CD34, GlyCAM-1, MadCAM-1, LFA-1, VLA-1. Mac-1, pl50.95, PECAM, ICAM-1, ICAM-2, ICAM-3, CD2, LFA3, mutant forms of IL-18, CD40, CD40L, vascular growth factor, IL-7, nerve growth factor, vascular endothelial

growth factor, Fas, TNF receptor, Flt, Apo-l, p55, WSL-1, DR3, TRAMP, Apo-3, AIR, LARD, NGRF, DR4, DR5, KILLER, TRAIL-R2, TRICK2, DR6, and Caspase ICE.

13. (Original) The composition of claim 12 wherein said immunogen is a target protein that encodes a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases.

14. (Original) The composition of claim 12 wherein said immunogen is a pathogen antigen.

15. (Original) The composition of claim 12 wherein said immunogen is an HIV-1 antigen.

16. (Canceled)

17. (Original) An injectable pharmaceutical composition comprising the composition of claim 12.

18. (Currently amended) A method of inducing cytotoxic T cell response in an individual against an immunogen, comprising administering to said individual a composition of claim 12 by intramuscular injection.

19-32. (Canceled)

33. (Currently amended) A method of inducing cytotoxic T cell response in an individual against an immunogen comprising administering to said individual by intramuscular injection: a nucleic acid molecule comprising a nucleotide sequence that encodes said

immunogen operable linked to regulatory elements; and a nucleic acid molecule comprising a nucleotide sequence that encodes said immunomodulating protein operably linked to regulatory elements, wherein said immunomodulating protein is selected from the group consisting of: MCP-I, MIP-la, MIP-lp, IL-8, and RANTES, L-selectin, P-selectin, E-selectin, CD34, GlyCAM-1, MadCAM-1, LFA-1, VLA-1. Mac-1, pl50.95, PECAM, ICAM-1, ICAM-2, ICAM-3, CD2, LFA3, mutant forms of IL-18, CD40, CD40L, vascular growth factor, IL-7, nerve growth factor, vascular endothelial growth factor, Fas, TNF receptor, Flt, Apo-l, p55, WSL-1, DR3, TRAMP, Apo-3, AIR, LARD, NGRF, DR4, DR5, KILLER, TRAIL-R2, TRICK2, DR6, and Caspase ICE.

34. (Original) The method of claim 33 wherein said immunogen is a target protein that encodes a pathogen antigen, a cancer-associated antigen or an antigen linked to cells associated with autoimmune diseases.

35. (Previously presented) The method of claim 33 wherein said immunogen is a pathogen antigen.

36. (Original) The method of claim 33 wherein said immunogen is an HIV-1 antigen.

37–39. (Canceled)

40. (Currently amended) The ~~plasmid~~ composition of claim 1 wherein said immunogen is a viral antigen.

41. (Previously presented) The composition of claim 12 wherein said immunogen is a viral antigen.

42. (Previously presented) The composition of claim 12 wherein said immunogen is herpes simplex antigen HSV2gD.

43. (Previously presented) An injectable pharmaceutical composition comprising the composition of claim 42.

44. (Currently amended) A method of immunizing an individual against a herpes simplex virus infection comprising administering to said individual a composition of claim 42 by intramuscular injection.

45. (Previously presented) The method of claim 33 wherein said immunogen is a viral antigen.

46. (Currently amended) ~~The~~ A plasmid ~~of claim 1~~ comprising a nucleotide sequence that encodes an immunogen operably linked to regulatory elements and a nucleotide sequence that encodes an immunomodulating protein operably linked to regulatory elements, wherein said immunomodulating protein is selected from the group consisting of: MCP-I, MIP-la, MIP-lp, IL-8, and RANTES, L-selectin, P-selectin, E-selectin, CD34, GlyCAM-1, MadCAM-1, LFA-1, VLA-1, Mac-1, pl50.95, PECAM, ICAM-1, ICAM-2, ICAM-3, CD2, LFA3, mutant forms of IL-18, CD40, CD40L, vascular growth factor, IL-7, nerve growth factor, vascular endothelial growth factor, Fas, TNF receptor, Flt, Apo-l, p55, WSL-1, DR3, TRAMP, Apo-3, AIR, LARD, NGRF, DR4, DR5, KILLER, TRAIL-R2, TRICK2, DR6, and Caspase ICE, wherein said immunogen is an influenza antigen.

47. (Currently amended) A method of immunizing an individual against a influenza infection comprising administering to said individual a plasmid of claim 46 by intramuscular injection.

48. (Currently amended) A method of immunizing an individual against a pathogen infection comprising administering to said individual a plasmid of claim 3 by intramuscular injection.

49. (Currently amended) A pyrogen-free ~~The~~ composition ~~of claim 12~~ comprising two plasmids: a first plasmid comprising a nucleotide sequence that encodes an immunogen operably linked to regulatory elements; and a second plasmid comprising a nucleotide sequence that encodes an immunomodulating protein operably linked to regulatory elements, wherein said immunomodulating protein is selected from the group consisting of: MCP-I, MIP-la, MIP-lp, IL-8, and RANTES, L-selectin, P-selectin, E-selectin, CD34, GlyCAM-1, MadCAM-1, LFA-1, VLA-1. Mac-1, pl50.95, PECAM, ICAM-1, ICAM-2, ICAM-3, CD2, LFA3, mutant forms of IL-18, CD40, CD40L, vascular growth factor, IL-7, nerve growth factor, vascular endothelial growth factor, Fas, TNF receptor, Flt, Apo-l, p55, WSL-1, DR3, TRAMP, Apo-3, AIR, LARD, NGRF, DR4, DR5, KILLER, TRAIL-R2, TRICK2, DR6, and Caspase ICE, and wherein said immunogen is an influenza antigen.

50. (Currently amended) A method of immunizing an individual against a influenza infection comprising administering to said individual a composition of claim 49 by intramuscular injection.

51. (Currently amended) A method of immunizing an individual against a pathogen infection comprising administering to said individual a composition of claim 14 by intramuscular injection.

52. (Previously presented) A method of claim 33 wherein said immunogen is an influenza antigen.